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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/585,960

07/13/2006

Larry Yen

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EXAMINER

FORTUNA, ANA M

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

10/06/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/585,960	Applicant(s) YEN ET AL.	
	Examiner Ana M. Fortuna	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 12-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/2/06, 7/13/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-11, drawn to a membrane.

Group II, claim(s) 12-22, drawn to a process for removing microbubbles.

2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the composition separated by the membrane, e.g. antireflective coating, the spinning wafer, the surfactants constitute special technical features that are not part of the membrane composition. Patent 5,137,633 evidences that the membrane including the limitations of claims 1-11 is directed to a distinct technical feature.

3. During a telephone conversation with Timothy J. King on 9/30/08 a provisional election was made with traverse to prosecute the invention of group I, claims 1-11.

Affirmation of this election must be made by applicant in replying to this Office action.

Claims 12-22 are withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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5. The examiner has required restriction between product and process claims.

Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder.

All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Claim Rejections - 35 USC § 112

6. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is unclear as to whether modifying the polar and non-polar characteristics of the porous membrane is intended.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-5, 7, 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Steuck (US 4,618,533). Patent '133 discloses the membrane modification of the claims above. By the process a porous support is coated with a crosslinked hydroxyalkyl acrylate (abstract); the support is microporous and made from PTFE, polyethylene, etc (column 1, first and second paragraphs; column 2, lines 45 through column 3, line). The support treatment includes polymerization of monomers, such as methacrylamide and other acrylamide provide polar functionality (column 3, lines 35-60). As to claims 5, 7, the monomers are polymerized in situ and in presence of an initiator (column 3, last paragraph bridging column 4; column 4, lines 44-51). As to claim 3 providing methylene moieties is further disclosed in the patent, e.g. methylene bisacrylamide (column 4, first paragraph). The membrane capability for removing microbubbles and stability of

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degradation as in claims 1, and 2, appears to be inherent of the membrane in patent '533, because the same polar groups are provided on the support membrane.

9. Claims 1-4, 7, 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang et al (US 5,137,633). Patent '633 discloses the membrane treatment of claim 1, including the support material and surface treatment (abstract, column 2, lines 36-68; column 3, lines 22-41). Treatment with methacrylamide monomers is further disclosed (column 4, lines 37-51); crosslinking in presence of an initiator is also taught by patent '633 (column 4, last paragraph, bridging column 5). As to claim 2, the membrane stability appears to be inherent of the support and further membrane treatment in patent '633). As to claim 3, the methylene moiety is imparted by compounds such as tetraethylene glycol diacrylate (column 4, lines 60-65).

10. Claims 1, 4, 7, 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Pitt et al (US 4,571,244). Patent '244 teaches the device or membrane including a microporous PTFE microporous support modified with acrylate or methacrylate including amide groups; the pores of the support are not varied with the treatment (abstract, column 2, lines 34-68; column 3, and column 4, lines 1-58). The initiator, filtration device or apparatus, e.g. A hollow tubular culture device, is disclosed in '244 (column 6, lines 39-50). The membrane stability is provided by the support and further crosslinked polar groups.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 6, 8, 10, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steuck et al (US 4,618,533). Claim 6 includes dimethylacrylamide as an alternative polymerizable composition or monomer. This is not disclosed in patent '533; however, the patent teaches acrylamide having dimethyl groups substituents groups, e.g. 2-N,N-dimethylaminoethyl methacrylate (column 3, lines 46-48). It would have been obvious to one skilled in this art at the time the invention was made to select DMAM as the polymerizable monomer, based on the suggestion in the patent of selecting acrylamide or methacrylamde, and optionally substitute with dimethyl groups. Regarding to claim 8, polyolefin supports, including polyethylene are suggested in the art as microporous support,; selecting an ultrahigh molecular weight polyethylene would have been obvious to the skilled artisan wishing to provide hydrophobic properties and high strength to the membrane. As to claim 10, the present invention and the prior art both use the same pore size support, e.g. microporous, the skilled in the art at the time this invention was made can be able to predict that if the membrane is treated under the same conditions the resulting membrane will have the same bubble point. Regarding claim 11, the claimed control is inherent of the particular polar monomers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana M. Fortuna whose telephone number is (571) 272-1141. The examiner can normally be reached on 9:30-6:00 M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ana M Fortuna
Primary Examiner
Art Unit 1797

/Ana M Fortuna/
Primary Examiner, Art Unit 1797